Transportation Storage and Monitoring of Radioactive Materials

Double Bagging Procedures

- 1. Put on latex gloves

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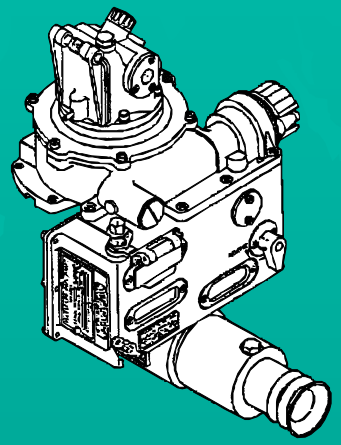
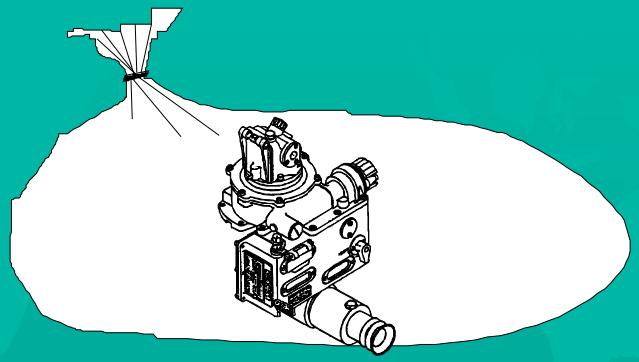


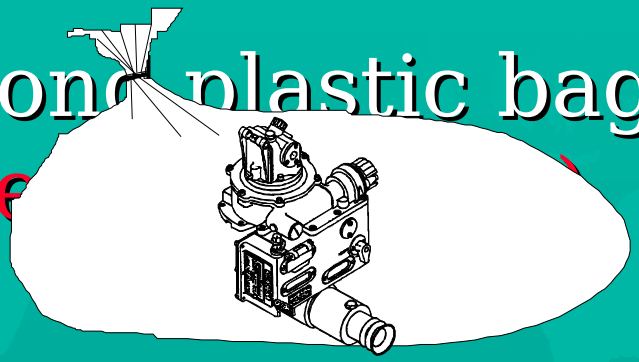
Double Bagging Procedures

- 1. Put on latex gloves
- 2. Put Item in plastic bag (seal with tape)



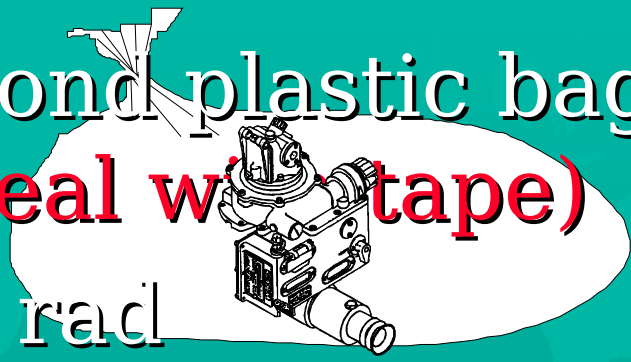
Double Bagging Procedures

- 1. Put on latex gloves
- 2. Put Item in plastic bag (seal with tape)
- 3. Put Item in second plastic bag (se



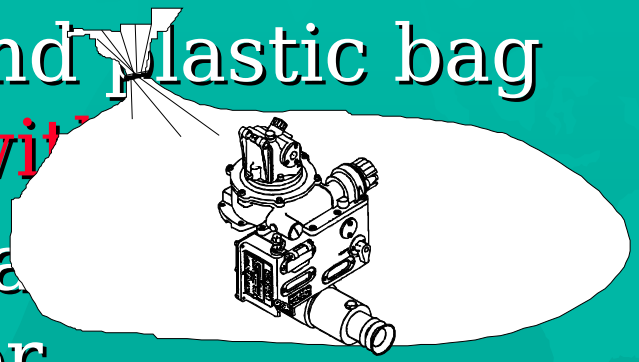
Double Bagging Procedures

- 1. Put on latex gloves
- 2. Put Item in plastic bag (seal with tape)
- 3. Put Item in second plastic bag (seal with tape)
- 4. Place gloves in rad waste container



Double Bagging Procedures

- 1. Put on latex gloves
- 2. Put Item in plastic bag (seal with tape)
- 3. Put Item in second plastic bag (seal wi
- 4. Place gloves in ra
  waste container
- 5. Place Label on bag.

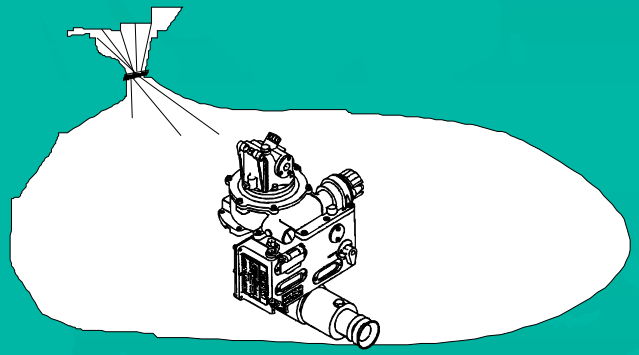


Double Bagging Procedures

- Label
- Broken device _____
- Containing _____
- Contact RPO/RSO_____
- Name_____
- Date_____
- ***Do Not Open***

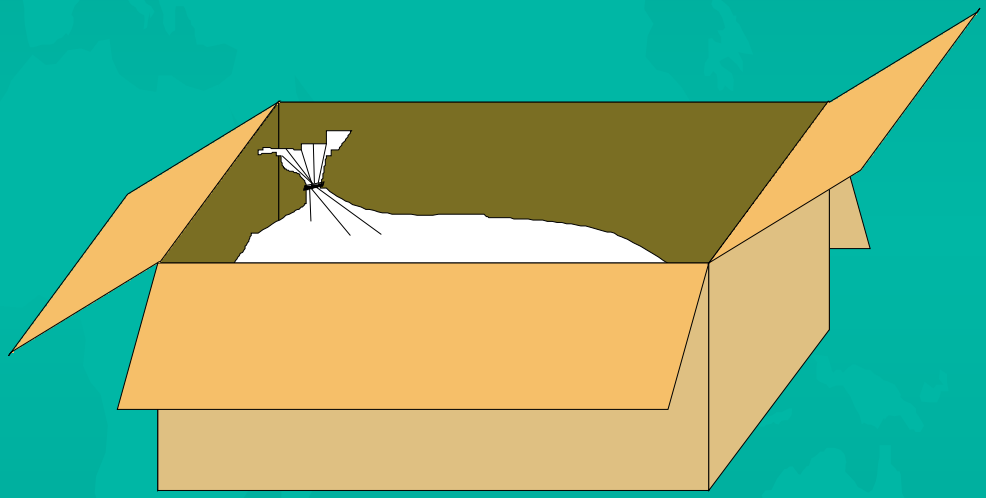
Packaging & Labeling

1. **Double bagged in plastic**



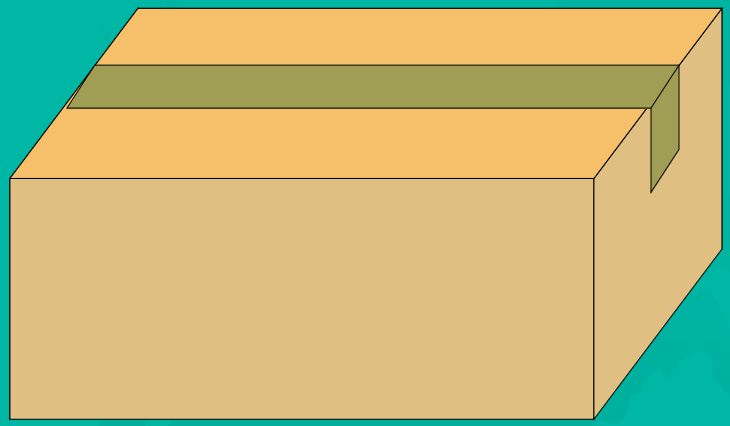
Packaging & Labeling

1. Double bagged in plastic
2. Placed in strong container



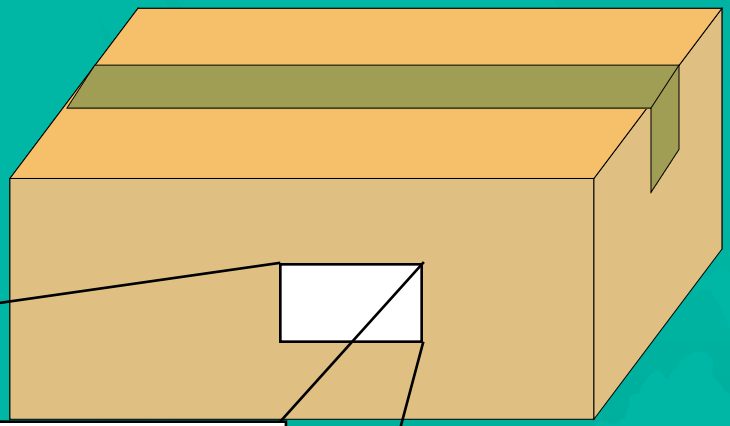
Packaging & Labeling

1. Double bagged in plastic
2. Placed in strong container
3. Tightly sealed



Packaging & Labeling

1. Double bagged in plastic
2. Placed in strong container
3. Tightly sealed
4. Apply the proper shipping label

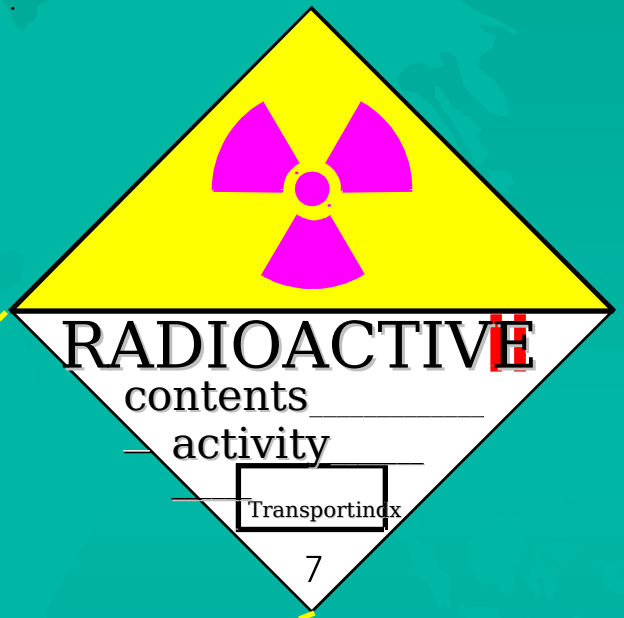


CONSIGNOR: _____

_____

THIS PACKAGE CONFORMS TO THE CON-
DITIONS AND LIMITATIONS SPECIFIED IN
49 CFR 173.424 FOR EXCEPTED

Packaging & Labeling



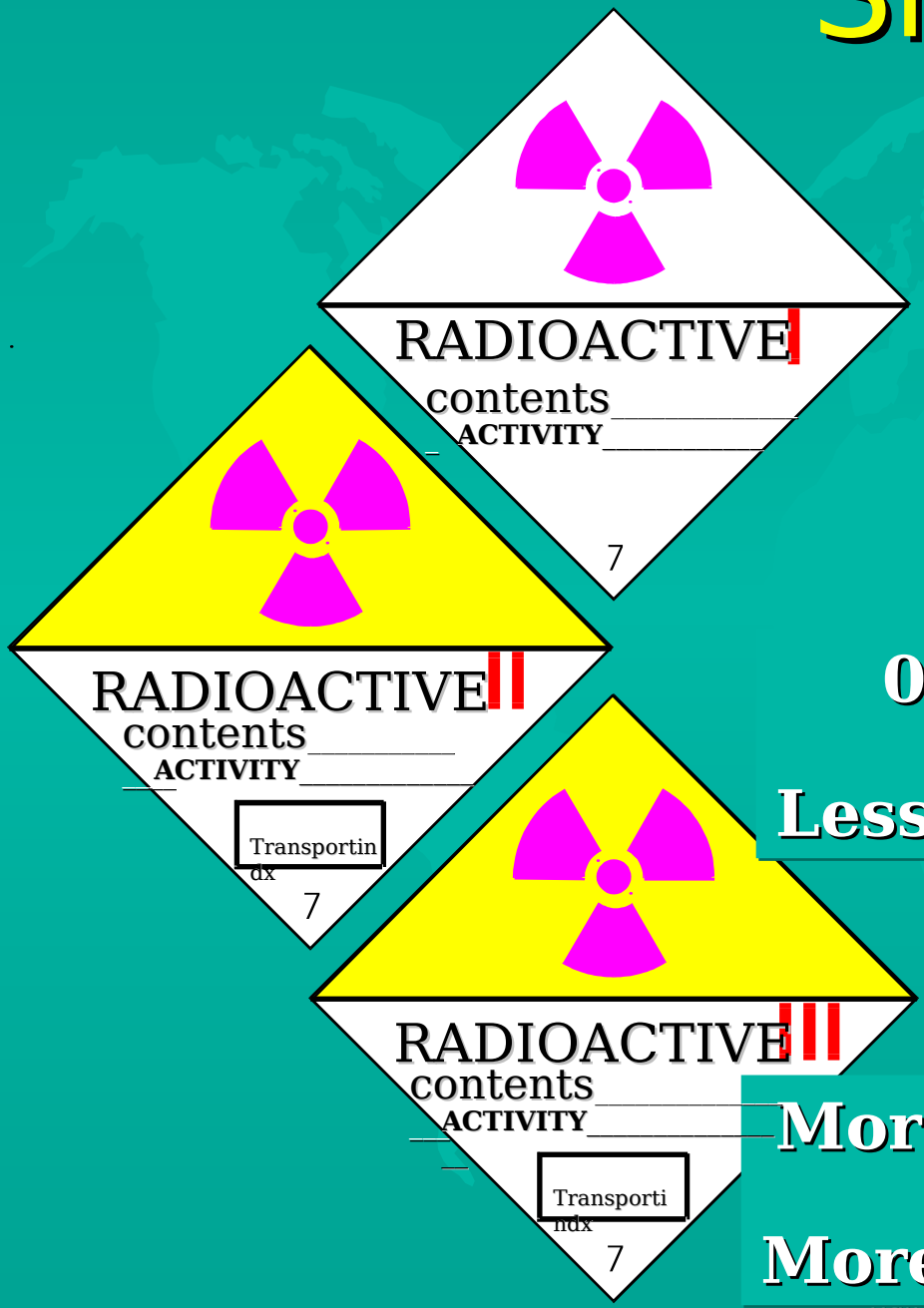
Level II

0.5 - 50 mRem/hr @ Surface

and

Less than 1.0 mRem/hr @ 1 Mete

Shipping Labels



Level I

Less than 0.5 mRem/hr

Level II

0.5 - 50 mRem/hr @ Surface

and

Less than 1.0 mRem/hr @ 1 Met

Level III

More than 50 mRem/hr @ Surfa

or

More than 1.0 mRem/hr @ 1 Me

Tritium Storage

- Annual inventories are required
- Quarterly Wipe Test is required
- No more than 1000 Ci for supply type storage in the field
- Store in well ventilated area
  - At least 12 air exchanges per day
- No more than 200 Ci for maintenance and other storage areas in the field
- Post area *"Caution Radioactive Material"*

CAM and CAD Storage

- Store in a secured area
- Posted
- CAM & CAD may be stored together

Storage of MC-1

- Must be stored in a locked, unoccupied, and isolated area
- May be stored in a supply area or weapons storage area provided:
  - Stored in its approved container
  - Locked in a metal cabinet
  - As far as possible from personnel work areas
  - Floor markings to indicate 2 meter radius to be entered only by the RPO or operator with TLD
- Must have AN/PDR-27 or equivalent
- The area must be posted

Selection Factors

- **Purpose**
  - **Detection devices should not be used to measure dose rates**
- **Degree of accuracy required**
- **Type of radiation - *alpha*, *beta*, or *gamma***
- **Energy of the radiation**
- **Source form - gas, liquid, solid, etc..**
- **Each facility should have a list of available radiac equipment**

Radiac Meter Selection Chart

	Wipe Test	AN/PDR-56	AN/PDR-60	AN/PDR-77			AN/PDR-27	AN/VDR-2
		Alpha	Alpha	Alpha Probe	Beta/Gamma	X-Ray	Beta/Gamma	Beta/Gamma
M43A1 (Americium-241)								
Detect Contamination	XXX	XXX	XXX	XXX				
Measure Contamination Level	XXX							
Locate Missing Source					XXX	XXX	XXX	XXX
CAM (Nickel-63)								
Detect Contamination	XXX				XXX		XXX	XXX
Measure Contamination Level	XXX							
Locate Missing Source					XXX		XXX	XXX
MC-1								
Americium/Berillium								
Detect Contamination	XXX							
Measure Contamination Level	XXX							
Locate Missing Source								
Cesium								
Detect Contamination	XXX				XXX		XXX	XXX
Measure Contamination Level	XXX							
Locate Missing Source					XXX	XXX	XXX	XXX
Tritium								
Detect Contamination	XXX							
Measure Contamination Level	XXX							
Radium								
Detect					XXX		XXX	XXX
Thorium								
Detect Contamination	XXX	XXX	XXX	XXX	XXX		XXX	XXX
Measure Contamination Level	XXX							
Locate Missing Source					XXX	XXX	XXX	XXX
Depleted Uranium								
Detect Contamination	XXX	XXX	XXX	XXX	XXX		XXX	XXX
Measure Contamination Level	XXX							
Locate Missing Source					XXX	XXX	XXX	XXX
Cesium								
Detect Contamination	XXX				XXX		XXX	XXX
Measure Contamination Level	XXX							
Locate Missing Source					XXX	XXX	XXX	XXX